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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/961,114  | 09/20/2001  | Donald V. Perino     | RB1-035USC3         | 4507             |
| 29150   | 7590        | 03/21/2005           | EXAMINER            |                  |
| LEE & HAYES, PLLC<br>421 W. RIVERSIDE AVE, STE 500<br>SPOKANE, WA 99201 |             |                      | FIGUEROA, FELIX O   |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2833                |                  |

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/961,114

Applicant(s)

PERINO ET AL.

Examiner

Felix O. Figueroa

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 112-122 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 112-122 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

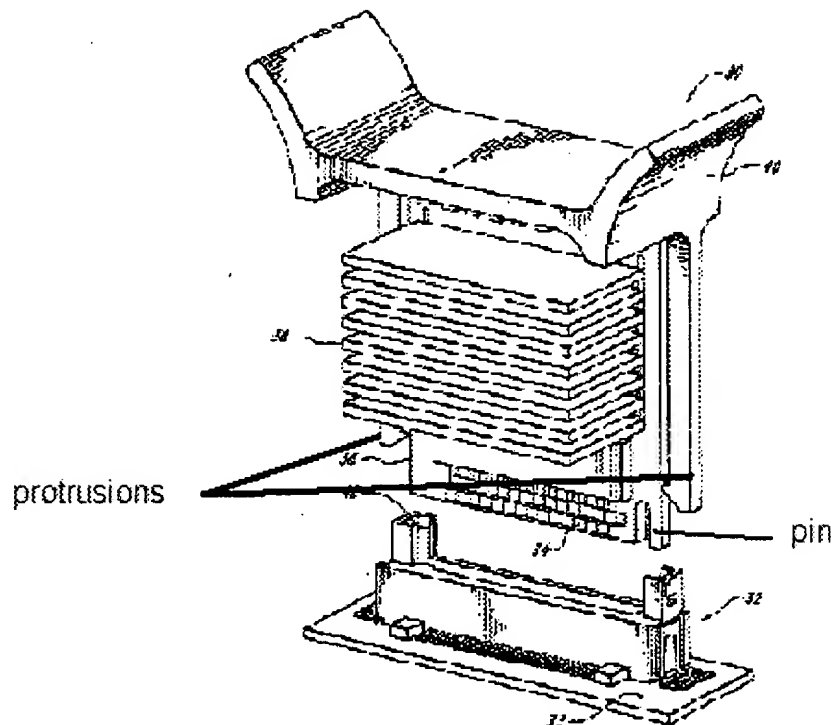
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 112, 113 and 116-122 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellomo et al. (US 5,419,712) in view of Ester (US 5,214,563).

Bellomo discloses a chip socket assembly comprising: a chip package (36) having a contact side, the contacts adapted for detachable electrical coupling to a circuit board, the chip package having second and third sides formed with oppositely disposed protrusions (see following figure); an integrated circuit disposed within the chip package (please note that a chip package inherently has an IC), the integrated circuit electrically coupled to the plurality of compliant contacts; and a base (32) formed with oppositely disposed clip portions (at 46, 51) to receive the chip package, the clip portions formed with sockets to detachably engage the chip package protrusions.

Bellomo discloses substantially the claimed invention except for the compliant contacts. Estes discloses a chip package (110) with a plurality of compliant contacts (120), each compliant contact adapted to detachably electrical coupling to a circuit board to enable a flexible and reliable mounting. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the

chip package of Bellomo with flexible leads, as taught by Estes, to enable a flexible and reliable mounting.



**FIG. 5**

Regarding claim 113, Estes discloses the contacts being adapted for direct engagement to the circuit board. Please note that it has been held that a recitation that an element is "adapted for" performing a function is not a positive limitation but only requires the ability to so perform. *In re Hutchison*, 69 USPQ 138. In this case, the contacts of Estes would have been capable of directly engaging the circuit board.

Regarding claim 116, Estes discloses the contacts being compressible and the contact side of the chip package extending to form a pocket (dashed lines in Fig. 5) in to which the contacts extend when compressed. Therefore, it would have been obvious to

a person of ordinary skill in the art at the time the invention was made to form the chip package of Bellomo with a pocket, as taught by Estes, to enable protect the second end of the contacts.

Regarding claim 117, Bellomo discloses a pin (see previously shown Figure) extending from the chip package; and a slotted guide in the base configured to receive the pin and guide the chip package into the base.

Regarding claim 118, Estes discloses the flexible leads are substantially C-shaped. This shape provides an efficient interface. It would have been obvious to one of ordinary skill in the art at the time the invention was made form the contacts having a substantially C shape in order to provide an efficient interface.

Regarding claim 119, Bellomo discloses substantially the claimed invention except for the specific material of the contacts. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use beryllium-cooper as the preferred material in order to provide good conductivity, and since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

*In re Leshin*, 125 USPQ 416.

Regarding claims 120-122, Bellomo discloses substantially the claimed invention except for the material of the packaging material and/or the IC. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a flexible material, e.g. silicon rubber, as the preferred material, since it has been held to be within the general skill of a worker in the art to select a known material on the

basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 114 and 115 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellomo and Estes as discussed above and further in view of Cutchaw (US 4,293,175).

Bellomo, as modified by Estes, discloses substantially the claimed invention except for the elastomeric connector. Cutchaw teaches the use of an elastomeric connector (110) interposed between the circuit board (94) and the base (92a) to provide support and aligned contact with the mating element/board. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the package of Bellomo, as modified, with a elastomeric connector, as taught by Cutchaw, to provide support and aligned contact with the mating element/board.

Regarding claim 115, Bellomo, as modified, discloses substantially the claimed invention except for cylindrical shape. However, it would have been an obvious choice one having ordinary skill in the art to form the insert having a different shape, e.g. being cylindrical, since applicant has not disclosed that such shape solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with insert of Cutchaw.

### ***Response to Arguments***

Applicant's arguments filed January 13, 2005 have been fully considered but they are not persuasive.

In response to Applicant's arguments that Bellomo "does not teach a chip package" because a chip module is an assembly of chip packages, please note that it has been held that an indefinite article "a" or "an" in patent parlance carries the meaning of "one or more". See *Scanner Technologies v. ICOS Vision Systems corp.*, 70 USPQ2D 1900 (CA FC 2004).

In response to Applicant's arguments that Bellomo "does not teach an integrated circuit disposed within a chip package", please note that *The American Heritage® Dictionary of the English Language, Fourth Edition* defines "chip" as "[a]n integrated circuit".

In response to Applicant's arguments that Estes "teaches 'J' shaped leads 120 that are not flexible and that do not provide mechanical connection between the single integrated circuit chip and the circuit board", it is again noted that the claim is not restricted to a single integrated circuit chip. Additionally, please note that the claim does not require direct or mechanical connection between the IC chip and the circuit board. Furthermore, it appears that the structure of the leads (i.e. cantilevered conductive leads) provide the lead with inherent flexibility.

In response to Applicant's arguments that Estes "do not provide a mechanical connection between the single integrated circuit chip and the circuit board", it is noted that claim 112 only discloses "the contacts adapted for detachable electrical coupling", and not "mechanical connection". Nonetheless, it is noted that it has been held that a recitation that an element is "adapted for" performing a function is not a positive limitation but only requires the ability to so perform. *In re Hutchison*, 69 USPQ 138.

In response to Applicant's arguments that "[a] soldered connection is not detachable", please note that a soldered connection can be detached by force or heat, for example.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix O. Figueroa whose telephone number is (571) 272-2003. The examiner can normally be reached on Mon.-Fri., 10:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 Ext. 33. The fax phone




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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ffr



RENEE LUEBKE  
PRIMARY EXAMINER